

PROGRAM OF THE MULTI-SCALE MODELLING SUMMER SCHOOL

September 25-28 2018

Venue: Aula Magna, Universitat Rovira i Virgili, Tarragona, Catalonia (Spain)

Chair: Benjamin Iñiguez (Universitat Rovira i Virgili)

Co-Chair: Yvan Bonnessieux (Ecole Polytechnique, France)

SPONSORS:

Department of Electronic, Electrical and Automatic Control Engineering, Universitat Rovira i Virgili

Fundació Universitat Rovira i Virgili

SINANO Institute

“DOMINO” H2020 RISE Project

IEEE Electron Devices Society (EDS)

Tuesday, September 25 2018

8:30 Opening Session
 Opening
 Benjamin Iñiguez (Universitat Rovira i Virgili)

IEEE EDS MINI-COLLOQUIUM ON SEMICONDUCTOR DEVICE MODELLING

8:55 "Characterization Techniques for Ultrathin Materials and Devices".
 Sorin Cristoloveanu (MINATEC, France)

10:05 "Compact Modeling of Organic Thin Film Transistors"
 Jamal Deen (McMaster University, Canada)

11:15 Coffee Break

11:40 "Multiscale Reliability Modeling"
 Tibor Grassler (TU-Wien, Austria)

12:50 "FOSS TCAD/EDA Tools for Compact Modelling"
 Wladek Grabinski (GMC, Switzerland)

14:00 Lunch

SINANO MODELLING SUMMER SCHOOL

15:15 "Monte Carlo simulation of THz nanodevices based on III-V semiconductors"
 Javier Mateos (University of Salamanca, Spain)

16:25 “Monte Carlo simulation of emerging Si devices”
 Francisco Gámiz (University of Granada, Spain)

20:00 Welcome Reception

Wednesday September 26 2018

9:00 "Steep-slope devices: prospects and challenges"
 Elena Gnani (University of Bologna)

- 10:10 "Physics of novel devices for quantum information science"
Thierry Ferrus et al. (Hitachi Cambridge Laboratory, UK)
- 11:20 Coffee break
- 11:30 "Spiking Neural Circuits and Systems"
François Danneville (IEMN, France)
- 12:50 "Time Dependent Variability in CMOS devices: characterization and compact modelling"
Montserrat Nafria (Autonomous University of Barcelona, Spain)
- 14:00 Lunch
- 15:15 "Atomic-scale modelling of semiconductor technology"
Kurt Stokbro (Synopsis QuantumWise, Denmark)
- 16:25 "Nanostructuring and modeling of polymer solar cells"
Lluís F. Marsal (Universitat Rovira i Virgili, Spain)

Thursday, June 27 2018

- 9:00 "Complex structure deformation simulation in TCAD for flexible electronics"
Ahmed Nejim (Silvaco Europe Ltd., UK)
- 10:10 "Mathematical and Semi-physical modeling for emerging device technologies & needs"
Firas Mohamed. (Silvaco France, France)
- 11:20 Coffee break
- 11:30 "Advanced modeling of AlGaN/GaN HEMT transistors: the ASM HEMT model"
Sourabh Khandelwal (Macquarie University, Australia)
- 12:50 "Electrical characterization of low frequency noise"
Thomas Gneiting (AdMOS GmbH, Germany)
- 14:00 Lunch
- 15:15 "Compact modeling of memristors"
Rodrigo Picos (Universitat de les Illes Balears, Spain)
- 16:25 "Effective use of contact effects in high-gain, power-efficient thin-film transistors"
Radu Sporea (University of Surrey, UK)
- 20:30 Gala Dinner

Friday, September 28 2018

- 9:00 "Current status and trends in RF SOI material and devices"
Jean-Pierre Raskin (Université catholique de Louvain, Belgium)
- 10:10 "Characterization and Modelling of Organic Diodes and TFTs"
Yvan Bonnasieux. (Ecole Polytechnique, France)
- 11:20 Coffee break

- 11:30 “Mechanical Deformation-Aware Compact Modeling for Flexible Electronics”
Slobodan Mijalkovic (Silvaco Europe Ltd., UK)
- 12:50 "Modeling of devices and circuits for analog machine learning"
Giuseppe Iannaccone (University of Pisa, Italy)
- 14:00 Lunch
- 15:15 “Parameter extraction and modelling of Amorphous Oxide TFTs”
Benjamin Iñiguez (Universitat Rovira i Virgili, Spain)
- 16:25 Closing Session